

IN THE CLAIMS

1. (Currently Amended) A moving image coding apparatus, comprising:

coding means for (1) dividing an input moving image signal into a plurality of frame image signals, (2) dividing each of the frame image signals into one or more area image signals, and (3) compression coding each ~~the~~ area image signal into an area image code string, and (4) adding a-frame header information indicating a compression coding mode of the frame to ~~the~~ each area image code string; and

packetization means for collecting one or more area image code strings to which the frame header information is has been added, and for adding packet header information to the collected one or more area image code strings.

2. (Currently Amended) The moving image coding apparatus as claimed in claim 1, wherein said packetization means includes a multiplexer comprising:

a plurality of access unit generators configured to separate ~~for separating~~ the area image code strings into predetermined units and to generate ~~generating~~ access units; and

a sync layer packet generator, configured to receive ~~for receiving~~ the access units from the plurality of access unit generators and to generate ~~generating~~ a sync layer packet.

3. (Withdrawn) A moving image decoding apparatus comprising:

reception means for receiving a moving image code string put into a packet;

separation means for separating one or more area image code strings contained in each packet of the moving image code string;

area image decoding means for decoding the separated area image code string and outputting a decoded area image signal;

image frame decoding means for assembling the decoded area image signal for each frame and outputting a decoded frame image signal; and

means for generating a decoded moving image signal based on the decoded frame image signal.

4. (Withdrawn) The moving image decoding apparatus as claimed in claim 3 wherein said separation means comprises a decoder for decoding an access unit based on information of a sync layer packet header contained in the input code string and an access unit decoder for decoding an access unit header and generating an original code string.

5. (Withdrawn) A moving image coding apparatus comprising:

a plurality of coding means for dividing an input moving image signal into a plurality of frame image signals, dividing each of the frame image signals into one or more area image signals, and compression coding the area image signal into an area image code-string, and adding a frame header information indicating a coding mode of the frame to the area image code string; and

a plurality of packetization means for collecting one or more area image code strings to which the frame header information is added, and adding packet header information.

6. (Withdrawn) A moving image decoding apparatus comprising:

a plurality of reception means for receiving a plurality of moving image code strings put into packet;

area image decoding means for decoding area image code strings of the moving image code strings input from said plurality of reception means and outputting a plurality of decoded area image signals;

frame image decoding means for assembling the decoded area image signals for each frame and outputting a decoded image frame signal; and

means for generating a decoded moving image signal based on the decoded image frame signal.

7. (Withdrawn) The moving image coding apparatus as claimed in claim 1 wherein said packet header information includes time stamp information generated by converting time stamp information in the code strings into a predetermined format.

8. (Withdrawn) The moving image coding apparatus as claimed in claim 6 wherein said packet header information includes time stamp information generated by converting time stamp information in the code strings into a predetermined format.

9. (Withdrawn) The moving image decoding apparatus as claimed in claim 6 wherein said reception means has means for restoring time stamp information of an image contained in packet header information to the original from a predetermined format in said area image decoding means and said frame image decoding means.

10. (Withdrawn) A record medium recording a code string prepared by a moving image coding apparatus comprising: coding means for dividing an input moving image signal into a plurality of frame image signals, dividing each of the frame image signals into one or more area image signals, and compression coding the area image signal into an area image code string, and adding a frame header information indicating a coding mode of the frame to the area image code string; and packetization means for collecting one or more area image

code strings to which the frame header information is added, and adding packet header information.

11. (Withdrawn) The moving image coding apparatus as claimed in claim 5 wherein said packetization means includes a multiplexer comprising a plurality of access unit generators for separating the code strings into predetermined units and generating access units and a sync layer packet generator for receiving the access units from the access unit generators and generating a sync layer packet.

12. (Withdrawn) The moving image decoding apparatus as claimed in claim 6 wherein said separation means comprises a decoder for decoding an access unit based on information of a sync layer packet header contained in the input code string and an access unit decoder for decoding an access unit header and generating an original code string.

13. (Withdrawn) The moving image coding apparatus as claimed in claim 9 wherein said packet header information includes time stamp information generated by converting time stamp information in the code strings into a predetermined format.

14. (Withdrawn) (Currently Amended) A method of coding a moving image, comprising ~~the steps of~~:

dividing an input moving image signal into a plurality of frame image signals;  
dividing each of the frame image signals into one or more area image signals;  
compression coding ~~the~~ each area image signal into an area image code string;  
adding a frame header information indicating a compression coding mode of the frame to ~~the~~ each area image code string; and

collecting one or more area image code strings to which the frame header information is has been added, and adding packet header information to the collected one or more area image code strings.

15. (Withdrawn) (Currently Amended) The method of coding a moving image as claimed in claim 14, further comprising ~~the steps of:~~

separating the code strings into predetermined units and generating access units; and  
receiving the access units ~~from the access unit generators~~ and generating a sync layer packet.

16. (Withdrawn) A method of coding a moving image, comprising the steps of:  
dividing an input moving image signal into a plurality of frame image signals;  
dividing each of the frame image signal into one or more area image signals;  
compression coding the area image signal into an area image code string;  
adding a frame header information indicating a coding mode of the frame to the area image code string; and

collecting one or more area image code strings to which the frame header information is added, and adding packet header information.

17. (Withdrawn) A recording medium for executing computer program comprising the steps of:

dividing an input moving image signal into a plurality of frame image signals;  
dividing each of the frame image signals into one or more area image signals;  
compression coding the area image signal into an area image code string;

adding a frame header information indicating a coding mode of the frame to the area image code string; and

collecting one or more area image code strings to which the frame header information is added, and adding packet header information.

18. (Withdrawn) The recording medium for executing computer program as claimed in claim 17, wherein said computer program further comprising the steps of:

separating the code strings into predetermined units and generating access units; and  
receiving the access units from the access unit generators and generating a sync layer packet.

19. (Withdrawn) A recording medium for executing computer program comprising the steps of:

dividing an input moving image signal into a plurality of frame image signals;  
dividing each of the frame image signal into one or more area image signals;  
compression coding the area image signal into an area image code string;  
adding a frame header information indicating a coding mode of the frame to the area image code string; and  
collecting one or more area image code strings to which the frame header information is added, and adding packet header information.

20. (Withdrawn) A method of decoding a moving image, comprising the steps of:  
receiving a moving image code string put into a packet;  
separating one or more area image code strings contained in each packet of the moving image code string;

decoding the separated area image code string and outputting a decoded area image signal;

assembling the decoded area image signal for each frame and outputting a decoded frame image signal; and

generating a decoded moving image signal based on the decoded frame image signal.

21. (Withdrawn) The method of decoding a moving image as claimed in claim 20, further comprising the steps of:

decoding an access unit based on information of a sync layer packet header contained in the input code string; and

decoding an access unit header and generating an original code string.

22. (Withdrawn) A method of decoding a moving image, comprising the steps of:

receiving a plurality of moving image code strings put into packet;

decoding area image code strings of the moving image code strings input from said plurality of reception means and outputting a plurality of decoded area image signals;

assembling the decoded area image signals for each frame and outputting a decoded image frame signal; and

generating a decoded moving image signal based on the decoded image frame signal.

23. (Withdrawn) A recording medium for executing computer program comprising the steps of:

receiving a moving image code string put into a packet;

separating one or more area image code strings contained in each packet of the moving image code string;

decoding the separated area image code string and outputting a decoded area image signal;

assembling the decoded area image signal for each frame and outputting a decoded frame image signal; and

generating a decoded moving image signal based on the decoded frame image signal.

24. (Withdrawn) The recording medium for executing computer program as claimed in claim 22, wherein said computer program further comprises the steps of:

decoding an access unit based on information of a sync layer packet header contained in the input code string; and

decoding an access unit header and generating an original code string.

25. (Withdrawn) A recording medium for executing computer program comprising the steps of:

receiving a plurality of moving image code strings put into packet;

decoding area image code strings of the moving image code strings input from said plurality of reception means and outputting a plurality of decoded area image signals;

assembling the decoded area image signals for each frame and outputting a decoded image frame signal; and

generating a decoded moving image signal based on the decoded image frame signal.

26. (Withdrawn) The moving image coding apparatus as claimed in claim 1, wherein said frame header information includes any information of a time code, a VPO coding mode, intra DC VLC table change information, motion vector range information contained in the VOP header.



27. (Withdrawn) The moving image coding apparatus as claimed in claim 3, wherein said frame header information includes any information of a time code, a VPO coding mode, intra DC VLC table change information, motion vector range information contained in the VOP header.

28. (Withdrawn) The moving image coding apparatus as claimed in claim 5, wherein said frame header information includes any information of a time code, a VPO coding mode, intra DC VLC table change information, motion vector range information contained in the VOP header.

29. (Withdrawn) The moving image coding apparatus as claimed in claim 6, wherein said frame header information includes any information of a time code, a VPO coding mode, intra DC VLC table change information, motion vector range information contained in the VOP header.

30. (Withdrawn) The moving image coding apparatus as claimed in claim 9, wherein said frame header information includes any information of a time code, a VPO coding mode, intra DC VLC table change information, motion vector range information contained in the VOP header.

31. (Withdrawn) A moving image coding apparatus comprising:  
a coder configured to perform a function for dividing an input moving image signal into a plurality of frame image signals, dividing each of the frame image signals into one or more area image signals, and compression coding the area image signal into an area image

code string, and adding a frame header information indicating a coding mode of the frame to the area image code string; and

a packetizator configured to perform a function for collecting one or more area image code strings to which the frame header information is added, and adding packet header information.

32. (Withdrawn) The moving image coding apparatus as claimed in claim 31 wherein said packetization includes a multiplexer comprising a plurality of access unit generators configured to perform a function for separating the code strings into predetermined units and generating access units and a sync layer packet generator for receiving the access units from the access unit generators and generating a sync layer packet.

33. (Withdrawn) A moving image decoding apparatus comprising:

a receiver configured to perform a function for receiving a moving image code string put into a packet;

a separator for separating one or more area image code strings contained in each packet of the moving image code string;

an area image decoder configured to perform a function for decoding the separated area image code string and outputting a decoded area image signal;

an image frame decoder to perform a function for assembling the decoded area image signal for each frame and outputting a decoded frame image signal; and

a generator configured to perform a function for generating a decoded moving image signal based on the decoded frame image signal.

34. (Withdrawn) The moving image decoding apparatus as claimed in claim 33 wherein said separator comprises a decoder configured to perform a function for decoding an access unit based on information of a sync layer packet header contained in the input code string and an access unit decoder configured to perform a function for decoding an access unit header and generating an original code string.

35. (Withdrawn) A moving image coding apparatus comprising:  
a plurality of coders configured to perform a function for dividing an input moving image signal into a plurality of frame image signals, dividing each of the frame image signals into one or more area image signals, and compression coding the area image signal into an area image code string, and adding a frame header information indicating a coding mode of the frame to the area image code string; and

a plurality of packetizers configured to perform a function for collecting one or more area image code strings to which the frame header information is added, and adding packet header information.

36. (Withdrawn) A moving image decoding apparatus comprising:  
a plurality of receivers configured to perform a function for receiving a plurality of moving image code strings put into packet;  
an area image decoder configured to perform a function for decoding area image code strings of the moving image code strings input from said plurality of receivers and outputting a plurality of decoded area image signals;  
a frame image decoder configured to perform a function for assembling the decoded area image signals for each frame and outputting a decoded-image frame signal; and

a generator configured to perform a function for generating a decoded moving image signal based on the decoded image frame signal.

37. (Withdrawn) The moving image coding apparatus as claimed in claim 31 wherein said packet header information includes time stamp information generated by converting time stamp information in the code strings into a predetermined format.

38. (Withdrawn) The moving image coding apparatus as claimed in claim 36 wherein said packet header information includes time stamp information generated by converting time stamp information in the code strings into a predetermined format.

39. (Withdrawn) The moving image decoding apparatus as claimed in claim 36 wherein said receiver has a unit configured to perform a function for restoring time stamp information of an image contained in packet header information to the original from a predetermined format in said area image decoder and said frame image decoder.

40. (Withdrawn) The moving image coding apparatus as claimed in claim 35 wherein said packetizator includes a multiplexer comprising a plurality of access unit generators configured to perform a function for separating the code strings into predetermined units and generating access units and a sync layer packet generator configured to perform a function for receiving the access units from the access unit generators and generating a sync layer packet.

41. (Withdrawn) The moving image decoding apparatus as claimed in claim 36 wherein said separator comprises a decoder configured to perform a function for decoding an

access unit based on information of a sync layer packet header contained in the input code string and an access unit decoder configured to perform a function for decoding an access unit header and generating an original code string.

42. (Withdrawn) The moving image coding apparatus as claimed in claim 39 wherein said packet header information includes time stamp information generated by converting time stamp information in the code strings into a predetermined format.

43. (Withdrawn) The moving image coding apparatus as claimed in claim 31, wherein said frame header information includes any information of a time code, a VPO coding mode, intra DC VLC table change information, motion vector range information contained in the VOP header.

44. (Withdrawn) The moving image coding apparatus as claimed in claim 33, wherein said frame header information includes any information of a time code, a VPO coding mode, intra DC VLC table change information, motion vector range information contained in the VOP header.

45. (Withdrawn) The moving image coding apparatus as claimed in claim 35, wherein said frame header information includes any information of a time code, a VPO coding mode, intra DC VLC table change information, motion vector range information contained in the VOP header.

46. (Withdrawn) The moving image coding apparatus as claimed in claim 36, wherein said frame header information includes any information of a time code, a VPO

coding mode, intra DC VLC table change information, motion vector range information contained in the VOP header.

47. (Withdrawn) The moving image coding apparatus as claimed in claim 39, wherein said frame header information includes any information of a time code, a VPO coding mode, intra DC VLC table change information, motion vector range information contained in the VOP header.

48. (New) The moving image coding apparatus of claim 1, wherein said coding means and said packetization means are compatible with MPEG-4 coding and compression protocols.